

Service Manual

AUTOMOTIVE ELECTRONICS



MAZDA CX-BM4290F

MD Player Module [Dealer's Option]

PART No. : GJ6E 79 APX

VEHICLE : Universal

DESTINATION : All Countries

PRODUCED AFTER : Jun., 2002

Specifications*

General

Power Supply

DC 12V (11V - 16V)

Test Voltage 14.4V

Negative Ground

Current Consumption

Less than 1A (Illumination ON)

Wow and Flutter

Below measurable limits

Dimensions** (W×H×D)

133.8 × 41.1 × 125.7 (mm)

Weight**

0.71kg

MD Player

Total Harmonic Distortion

Less than 0.2%

Signal to Noise Ratio

More than 65dB (IHF-A)

Channel Separation

More than 52dB (IHF-A)

* Specifications and the design are subject to possible modification without notice due to improvements.

** Dimensions and Weight shown are approximate.

● Above specifications comply with EIA standards

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1 FEATUERS

• MD Track up/down function.

• MD Repeat/Random function.

2 LASER PRODUCTS

Caution

This product utilizes a laser.
Use of controls or adjustments or performance
of procedures other than those specified herein
may result hazardous radiation exposure.

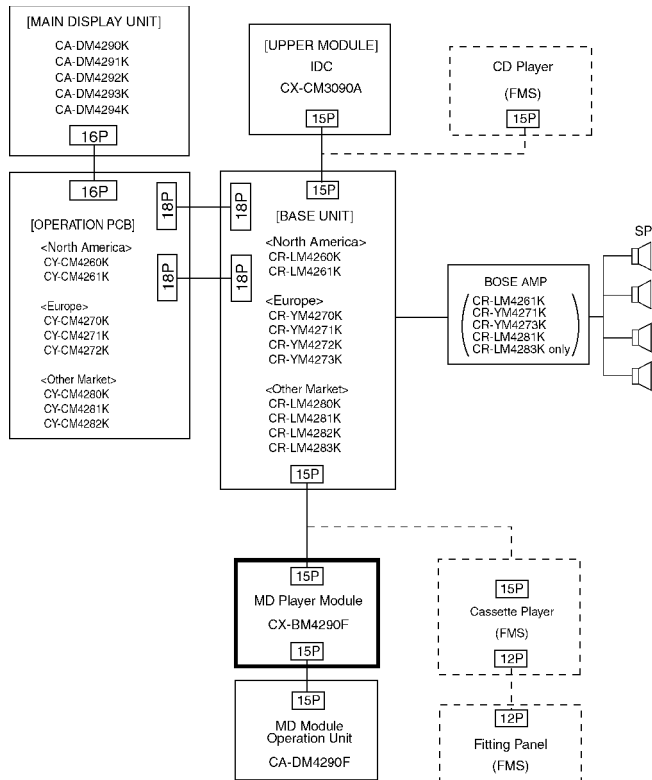
Laser products :

Wave Length 780nm
Laser power No hazardous radiation is
emitted with safety protection.

Do not take apart this unit or attempt to make any changes yourself.

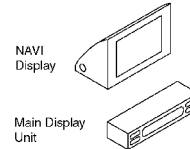
This unit is vey intricate that uses a laser pickup to retrieve information from the surface of compact discs.
The laser is carefully shielded so that its rays remain inside the cabinet.
Therefore, never try to disassemble the play or alter any of its parts since you may be exposed to laser
rays and dangerous voltages.

3 SYSTEM BLOCK DIAGRAM

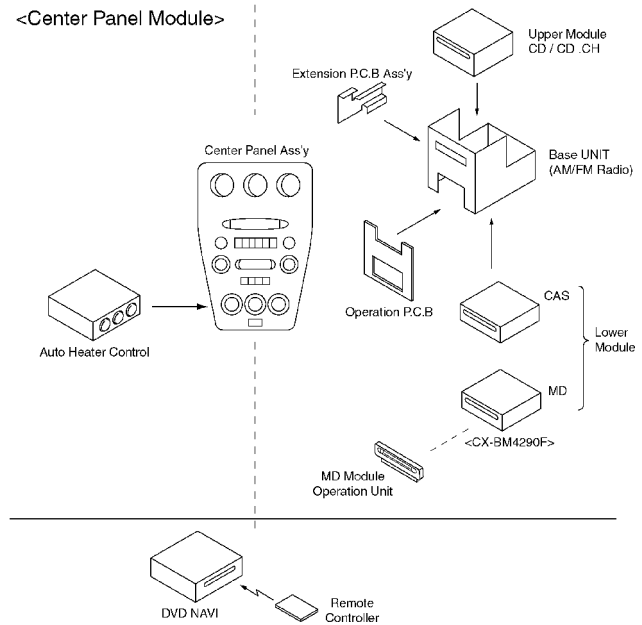


4 CENTER PANEL AUDIO SYSTEM

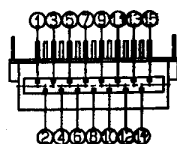
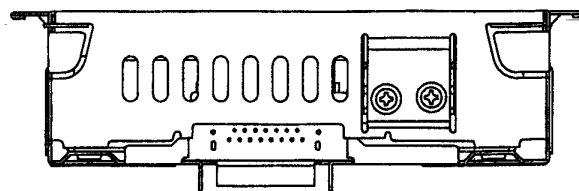
<Information Display>



<Center Panel Module>

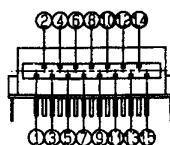
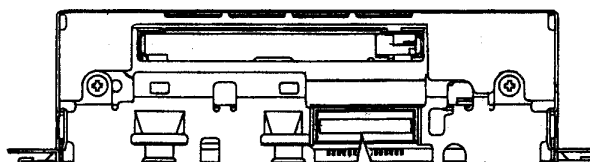
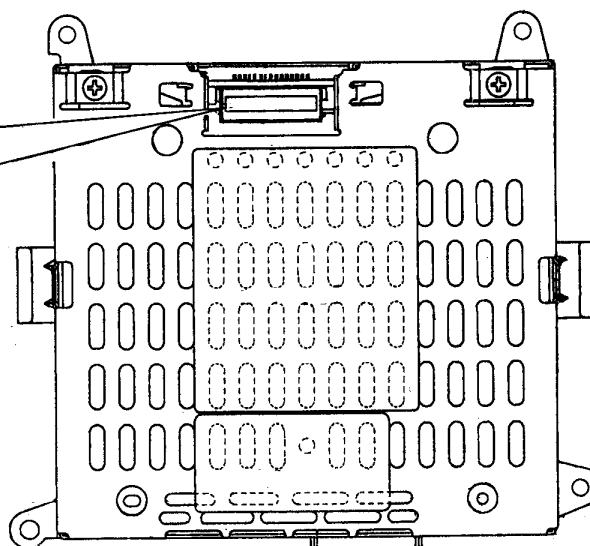


5 NAME OF FUNCTION OF EACH PARTS



CN703 15Pin Connector

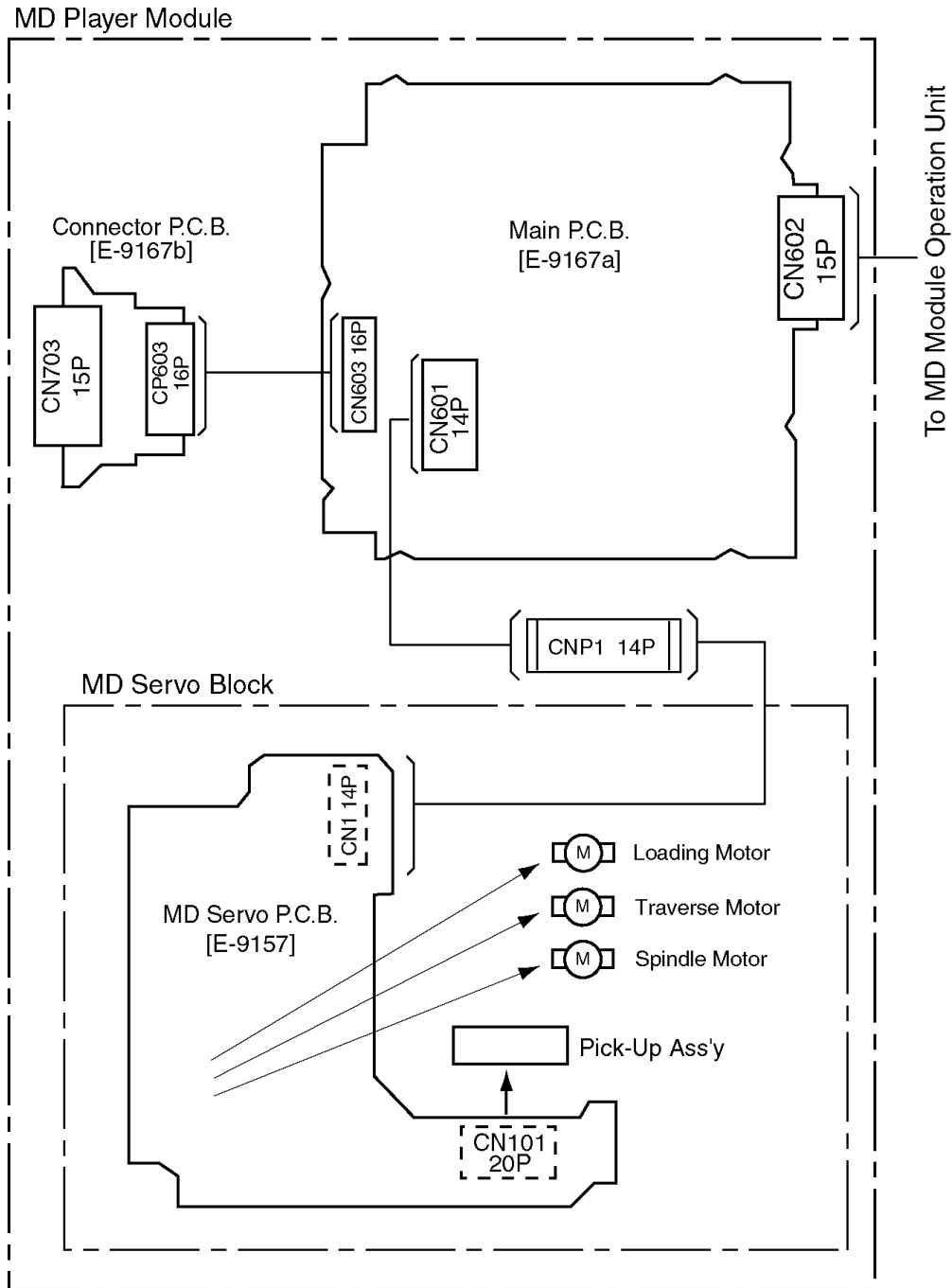
1. BUS \oplus
2. BUS \ominus
3. Power Supply, \oplus B
4. Power Supply, \ominus B
5. P.GND
6. P.GND
7. TNS \oplus
8. ILLUMI \ominus
9. MD CLOCK
10. MD DATA
11. Power Supply, ACC
12. SYSTEM MUTE
13. Rch \oplus INPUT
14. S.GND
15. Lch \oplus INPUT



CN602 15Pin Connector

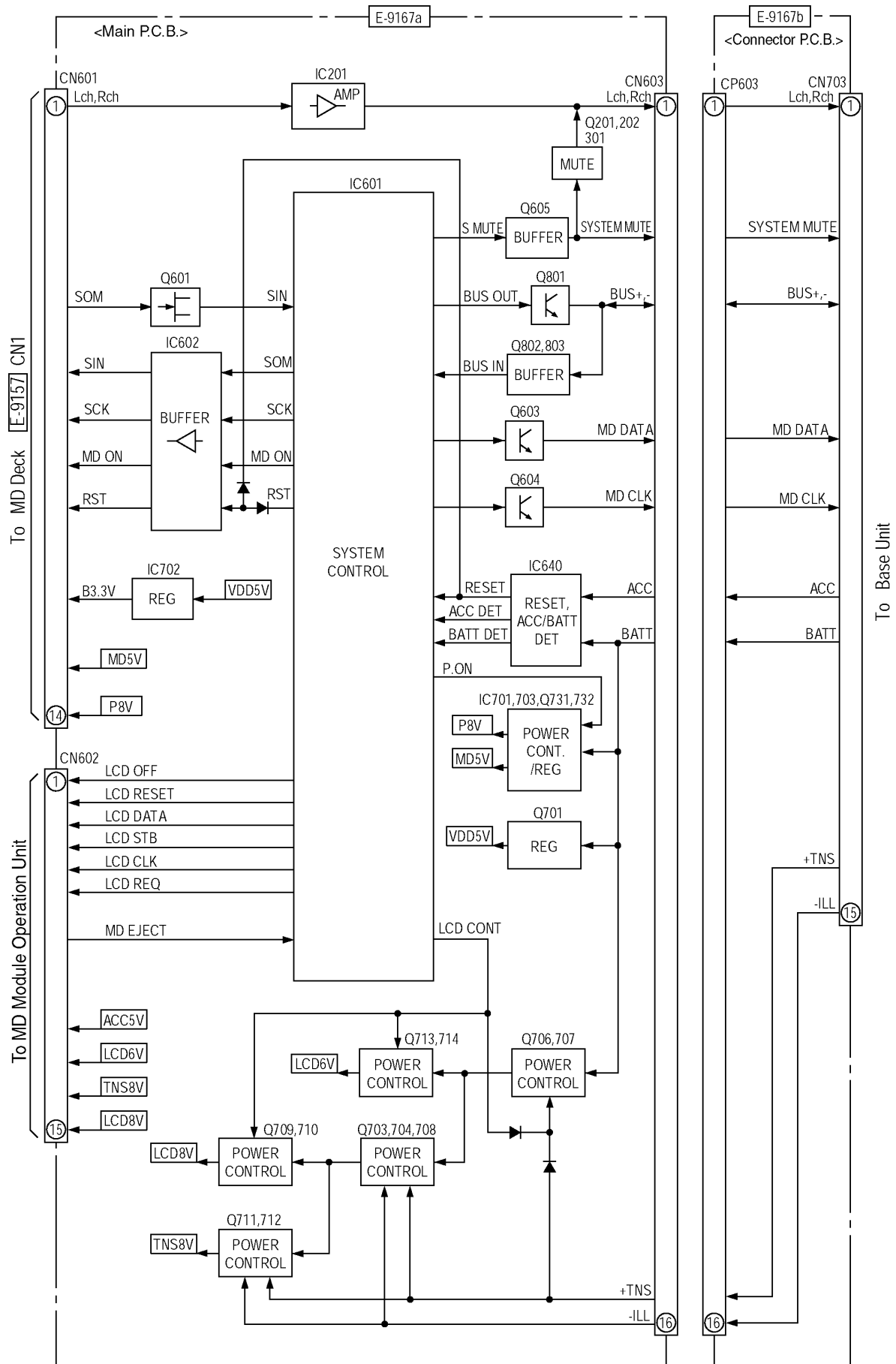
1. P. GND
2. P. GND
3. D. GND
4. D. GND
5. LCD 8V
6. TNS 8V
7. LCD 6V
8. ACC 5V
9. MD EJECT
10. LCD STB
11. LCD DATA
12. LCD CLK
13. KEY REQ
14. LCD RESET
15. LCD OFF

6 WIRING CONNECTION



7 BLOCK DIAGRAM

7.1. Main Block





8 TERMINALS DESCRIPTION

8.1. Main Block

IC601 : C2BBFE000113

Pin No.	Name	Description	I/O	Vol. (V)
1	(NC)	(Connecting to ground)	-	0
2	(NC)	(Connecting to ground)	-	0
3	(NC)	(Connecting to ground)	-	0
4	AVSS	Ground	-	0
5	(NC)	(Connecting to ground)	-	0
6	(NC)	(Connecting to ground)	-	0
7	AVREF1	Connect to VDD	-	5
8	(NC)	(Connecting to ground)	-	0
9	(NC)	(Connecting to ground)	-	0
10	P.ON	Power on signal	O	4.9
11	MD-SIM	MD serial data	I	0
12	MD-SOM	MD serial data	O	1.2
13	MD-SCK	MD clock	O	4.9
14	(NC)	(Connecting to ground)	-	0
15	(NC)	(Connecting to ground)	-	0
16	(NC)	(Connecting to ground)	-	0
17	MD DATA	MD data	O	0
18	MD CLK	MD clock	O	0
19	MD ON	MD controller enable	O	4.9
20	MD RESET	MD reset signal	O	4.9
21	(NC)	-	-	-
22	(NC)	-	-	-
23	(NC)	-	-	-
24	(NC)	-	-	-
25	(NC)	-	-	-
26	(NC)	-	-	-
27	(NC)	(Connecting to ground)	-	0
28	(NC)	(Connecting to ground)	-	0
29	(NC)	(Connecting to ground)	-	0
30	(NC)	(Connecting to ground)	-	0
31	(NC)	(Connecting to ground)	-	0
32	(NC)	(Connecting to ground)	-	0
33	VSS	Ground	-	0
34	(NC)	(Connecting to ground)	-	0
35	(NC)	(Connecting to ground)	-	0
36	(NC)	(Connecting to ground)	-	0
37	(NC)	(Connecting to ground)	-	0
38	(NC)	(Connecting to ground)	-	0
39	(NC)	(Connecting to ground)	-	0
40	(NC)	(Connecting to ground)	-	0
41	(NC)	(Connecting to ground)	-	0
42	(NC)	(Connecting to ground)	-	0
43	(NC)	(Connecting to ground)	-	0
44	(NC)	(Connecting to ground)	-	0
45	S.MUTE	Mute output	O	0
46	(NC)	(Connecting to ground)	-	0
47	(NC)	(Connecting to ground)	-	0
48	(NC)	(Connecting to ground)	-	0
49	(NC)	(Connecting to ground)	-	0
50	(NC)	(Connecting to ground)	-	0
51	(NC)	(Connecting to ground)	-	0
52	(NC)	(Connecting to ground)	-	0
53	(NC)	(Connecting to ground)	-	0
54	LCD CONT	LCD control	O	4.9
55	LCD RESET	LCD reset	O	4.9
56	LCD OFF	LCD off signal	O	4.9
57	LCD STB	LCD strobe	O	0
58	LCD CLK	LCD clock	O	0
59	LCD DATA	LCD data	I/O	4.9
60	RESET	Reset input	I	4.9

Pin No.	Name	Description	I/O	Vol. (V)
61	KEY REQ	Key data input	I	0.5
62	BATT-DET	BATT voltage detect	I	4.9
63	ACC-DET	ACC voltage detect	I	4.9
64	MD EJECT	MD eject	I	4.9
65	BUS IN	BUS signal input	I	4.9
66	BUS OUT	BUS signal output	O	0
67	(NC)	(Connecting to ground)	-	0
68	VDD	+5V power supply	-	5
69	X2	Crystal oscillator	-	3
70	X1	Crystal oscillator	-	2.6
71	IC	Ground	-	0
72	XT2(NC)	-	-	-
73	(NC)	(Connecting to VDD)	-	5.0
74	AVDD	+5V power supply	-	5
75	AVREF0	Ground	-	0
76	(NC)	(Connecting to ground)	-	0
77	(NC)	(Connecting to ground)	-	0
78	(NC)	(Connecting to ground)	-	0
79	(NC)	(Connecting to ground)	-	0
80	(NC)	(Connecting to ground)	-	0

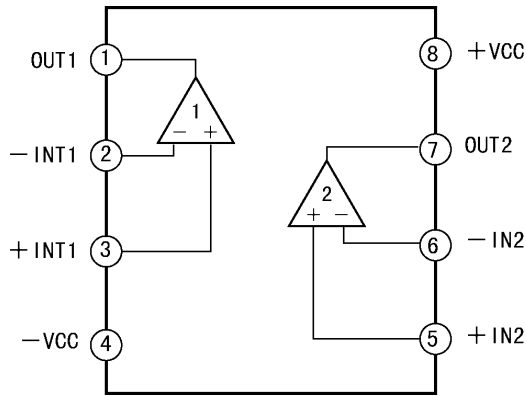
8.2. MD Servo Block

Pin No.	Name	Description	I/O	Vol. (V)
1	SCLK	Serial BUS clock	O	3.5
2	-	No connection	-	-
3	DAUOT	Not used	O	2.8
4	-	No connection	-	-
5	-	No connection	-	-
6	CNVSS	GND	-	0
7	-	No connection	-	-
8	-	No connection	-	-
9	/RESET	CPU reset	I	3.5
10	XOUT	Crystal oscillator terminal	O	1.7
11	VSS	GND	-	0
12	XIN	Crystal oscillator terminal	I	1.5
13	VCC	+3.3V power supply	-	3.5
14	-	(Connecting to BAT3.3V)	-	3.5
15	MDON	Startup signal	I	3.3
16	SQSY	Disk-subq-sync/ADIP-sync	I	3.2
17	XINT	Interrupt status signal	I	3.2
18	SENS	Serial BUS status	I	0.5
19	XLAT	Serial BUS latch	O	3.4
20	SCKM	Seral BUS clock	I	3.5
21-27	-	No connection	-	-
28	SON	Serial data	O	3.5
29	SIM	Serial data	I	1.0
30	SCKM	Data shift clock	I	3.5
31	-	No connection	-	-
32	MNT3	Monitor output	I	3.3
33	MNT2	Monitor output	I	3.3
34	MNT1	Monitor output	I	0
35	MNT0	Monitor output	I/O	3.3
36-40	-	No connection	-	-
41	XRST	Reset output	O	3.5
42	LD	Laser diode on/off	O	3.4
43	-	No connection	-	-
44	LV2	Servo Driver VC cont.	O	0
45	LV1	Servo Driver VC cont.	O	0
46	LD02	Servo Driver FWD	O	0
47	LD01	Servo Driver REV	O	0

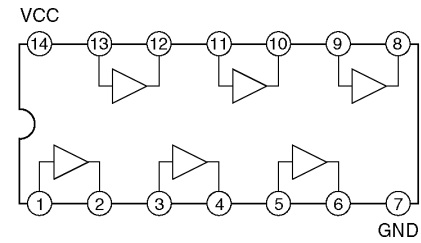
Pin No.	Name	Description	I/O	Vol. (V)
48	PC2	Servo Driver MUTE2	O	3.5
49	PC1	Servo Driver MUTE1	O	3.5
50	PUL Lon	SW1/SW2/SW3 input cont.	O	0
51-57	-	No connection	-	-
58	SW3	Disc-in detection	I	3.5
59-63	-	No connection	-	-
64	SW2	Disc clamp detection	I	0
65	SW1	Disc inner detection	I	0
66-74	-	No connection	-	-
75	AVSS	GND	-	3.5
76	RF-DS Power	Servo driver power cont.	O	3.5
77	VREF	Reference voltage BAT3.3V	-	3.5
78	AVCC	Analog power supply	-	3.5
79	SRDT	Serial data	I	3.0
80	SWDT	Serial data	O	0.7

9 IC BLOCK DIAGRAM

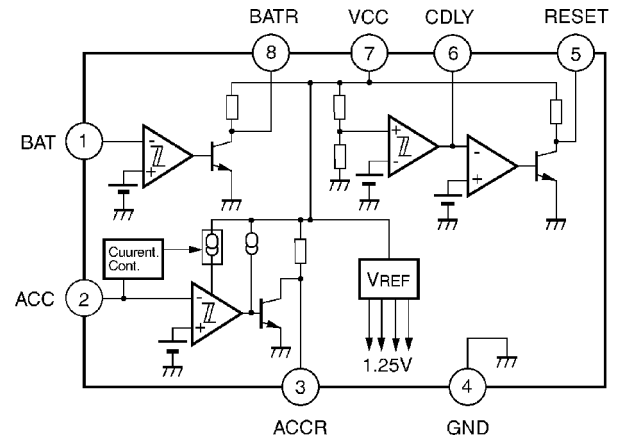
9.1. Main Block



IC201 : C0ABBB000045

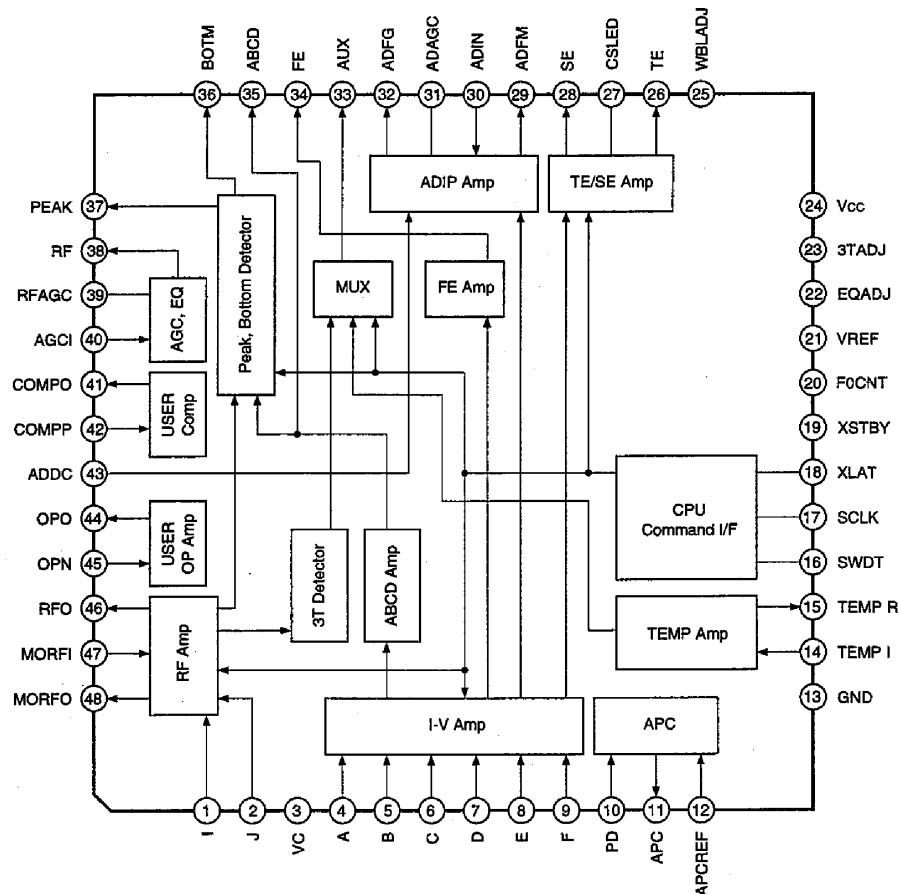


IC602 : YEAMT74HC07L

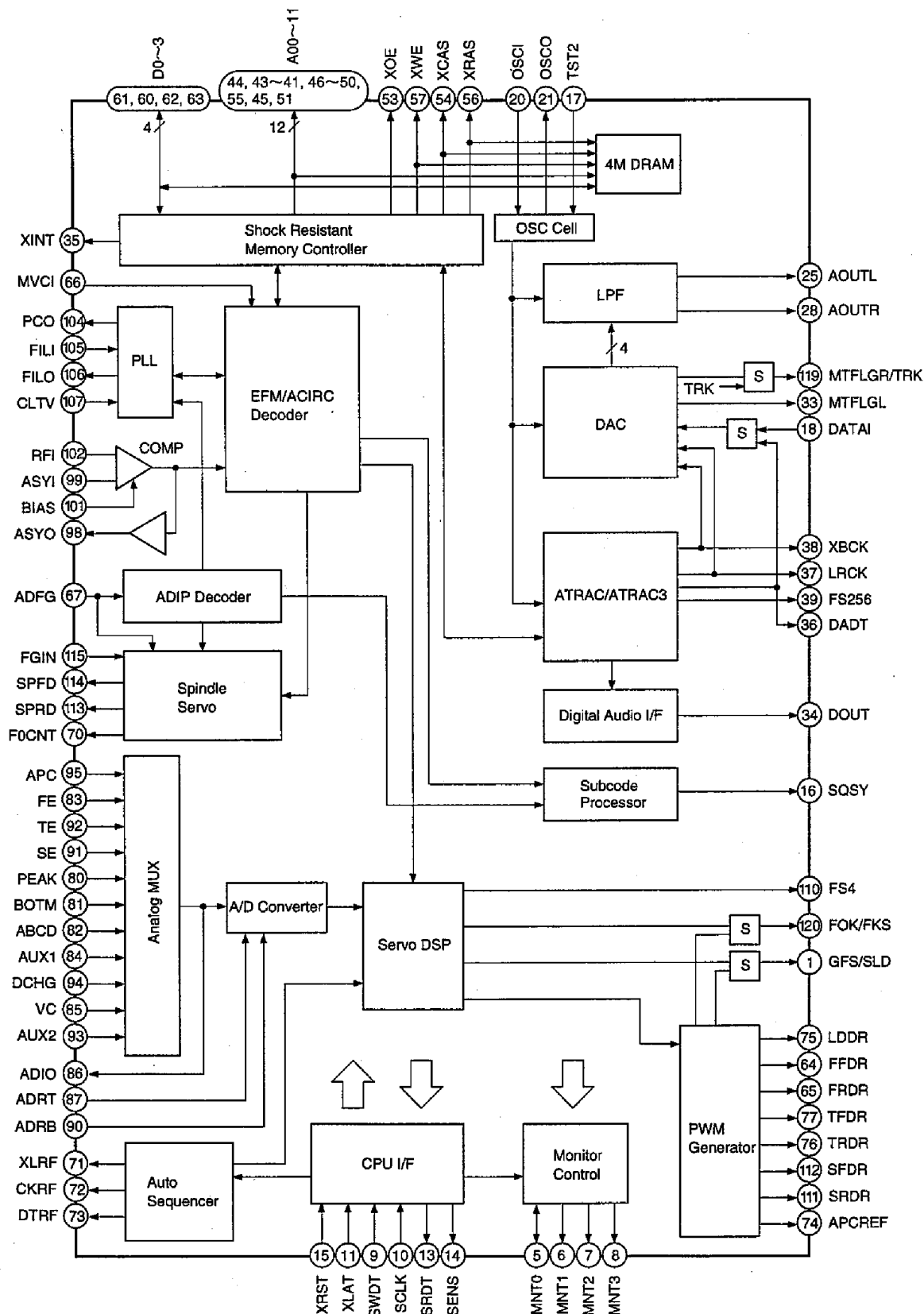


IC640 : AN8065SE1

9.2. MD Servo Block



IC101 : C1BB00000679



IC401 : C1BB00000680

10 REPLACEMENT PARTS LIST

Notes :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
5. "MCC" marks in remarks column are indicated supply parts of Matsushita Communication Industrial Corp. of America (MCC).

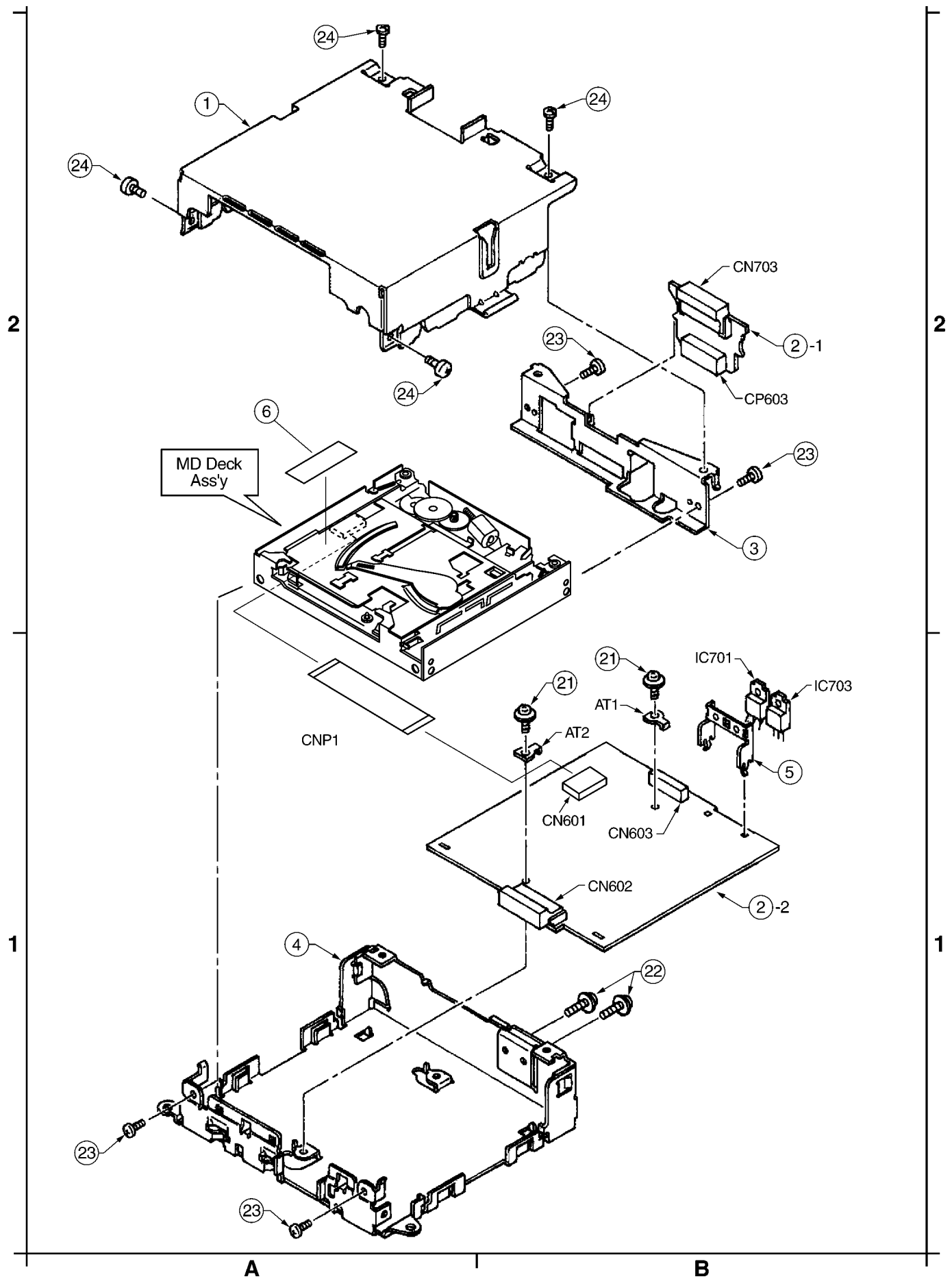
Ref. No.	Part No.	Part Name & Description	Remarks
[E9167] Main Block			
IC's and TRANSISTORS			
IC201	C0ABBB000045	IC	
IC601	C2BBFE000113	IC	
IC602	YEAMT74HC07L	IC	
IC640	AN8065SE1	IC	
IC701	YEAMPC2908HF	IC	
IC702	C0DBFGD00001	IC	
IC703	YEAMPC7805H	IC	
Q201	B1GBHBEA0004	Transistor	
Q202	B1GDCFJJ0002	Transistor	
Q301	B1GBHBEA0004	Transistor	
Q601	B1CEGG000001	Transistor	
Q603	B1GBCFJJ0002	Transistor	
Q604	B1GBCFJJ0002	Transistor	
Q605	YEANFMC5KTX	Transistor	
Q701	B1BBAC000007	Transistor	
Q703	YEANCI14WKT	Transistor	
Q704	YEANCI14YKX	Transistor	
Q706	YEANCI14YKX	Transistor	
Q707	YEANFP1F3PT1	Transistor	
Q708	YEAN2SD1856	Transistor	
Q709	YEANBP1F3PT	Transistor	
Q710	YEANCI14YKX	Transistor	
Q711	YEANBP1F3PT	Transistor	
Q712	YEANCI14YKX	Transistor	
Q713	B1GDCFJJ0002	Transistor	
Q714	B1GBCFNN0004	Transistor	
Q731	2SB1073TX	Transistor	
Q732	YEANCI14YKX	Transistor	
Q801	B1ABCF000044	Transistor	
Q802	B1GBCFNN0004	Transistor	
Q803	YEANA1037KTX	Transistor	
DIODES			
D602	MA152WATX	Diode	
D603	MA8056LMHTX	Diode	
D604	MA8056LMHTX	Diode	
D605	MA8056LMHTX	Diode	
D606	MA8056LMHTX	Diode	
D607	MA8056LMHTX	Diode	
D608	MA8056LMHTX	Diode	

Ref. No.	Part No.	Part Name & Description	Remarks
D609	MA8056LMHTX	Diode	
D610	MA8056LMHTX	Diode	
D611	MA8056LMHTX	Diode	
D702	YEADRD56M3T1	Diode	
D704	MA152WKT	Diode	
D705	B0ACCK000005	Diode	
D707	YEADRD82M1T1	Diode	
D708	YEADRD47M2T1	Diode	
D709	MA3X028TAL	Diode	
D802	MA153TX	Diode	
CAPACITORS			
C201	YECUS1H221JM	Ceramic, 220PF 50WV	
C202	ECEALCPD100I	Electrolytic, 10 μ F 16WV	
C203	YECUS1H221JM	Ceramic, 220PF 50WV	
C204	YECUS1H821JM	Ceramic, 820PF 50WV	
C205	ECEALCPD100I	Electrolytic, 10 μ F 16WV	
C213	ECEA0JKS101I	Electrolytic, 100 μ F 6.3WV	
C214	ECEALAKS101I	Electrolytic, 100 μ F 10WV	
C215	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C216	ECEALHKS010I	Electrolytic, 1 μ F 50WV	
C301	YECUS1H221JM	Ceramic, 220PF 50WV	
C302	ECEALCPD100I	Electrolytic, 10 μ F 16WV	
C303	YECUS1H221JM	Ceramic, 220PF 50WV	
C304	YECUS1H821JM	Ceramic, 820PF 50WV	
C305	ECEALCPD100I	Electrolytic, 10 μ F 16WV	
C311	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C601	ECEA0JKS331I	Electrolytic, 330 μ F 6.3WV	
C602	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C603	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C606	YECUS1H102KX	Ceramic, 1000PF 50WV	
C607	YECUS1H102KX	Ceramic, 1000PF 50WV	
C611	YECUS1H100CC	Ceramic, 10PF 50WV	
C612	YECUS1H100CC	Ceramic, 10PF 50WV	
C641	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C642	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C701	ECA1CM102L	Electrolytic, 1000 μ F 16WV	
C702	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C707	ECEA0JKS470I	Electrolytic, 47 μ F 6.3WV	
C711	YECUS1H102KX	Ceramic, 1000PF 50WV	
C714	ECEALAKS101I	Electrolytic, 100 μ F 10WV	
C715	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C716	YECUS1H102KX	Ceramic, 1000PF 50WV	
C718	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C719	ECEA0JKS101I	Electrolytic, 100 μ F 6.3WV	
C720	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C721	ECEALCKS100I	Electrolytic, 10 μ F 16WV	
C722	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C731	ECEALCKA100I	Electrolytic, 10 μ F 16WV	
C732	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C733	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C734	ECEA0JKA221I	Electrolytic, 220 μ F 6.3WV	
C735	ECEALCKA100I	Electrolytic, 10 μ F 16WV	
C736	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C737	ECEALAPK221I	Electrolytic, 220 μ F 10WV	
C738	YECUS1C104KX	Ceramic, 0.1 μ F 16WV	
C801	YECUS1H102KX	Ceramic, 1000PF 50WV	
C802	YECUS1H471JM	Ceramic, 470PF 50WV	
C803	YECUS1H330JM	Ceramic, 33PF 50WV	
RESISTORS			
J101	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J102	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J103	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J104	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J105	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J107	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J108	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J109	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J110	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	
J112	ERJ6GEY0R00V	Chip, 0 Ω 1/10W	

12

Ref. No.	Part No.	Part Name & Description	Remarks
CONNECTORS			
CN601	YEA5280714	Connector, 14P	
CN602	K1KB15B00015	Connector, 15P	
CN603	YEAETKCF16QS	Connector, 16P	
CN703	K1KB15B00015	Connector, 15P	
CP603	K1KA16B00068	Connector, 16P	
COILS			
L601	YELTBLM2B222	Coil	
L721	YELTBLM2B222	Coil	
L723	YELTBLM2B222	Coil	
L724	YELTBLM2B222	Coil	
L725	YELTBLM2B222	Coil	
L726	YELTBLM2B222	Coil	
L727	YELTBLM2B222	Coil	
L728	YELTBLM2B222	Coil	
L729	YELTBLM2B222	Coil	
L732	YELTBLM2B222	Coil	
CRYSTAL			
XL601	H0D419400009	Crystal	
INSTALLATION PARTS			
	YEP9BS1173	Mounting Parts Kit	
Mechanical Parts			
MISCELLANEOUS			
AT1	YEAT03346A	Terminal	
AT2	YEAT03346A	Terminal	
CNP1	K9ZZ00000860	Connector, 14P	
1	YEFA031730	Upper Cover	
2	YEP0PT9167A0	PCB w/Component	RTL
3	YEFX0215011	Bracket, Deck	
4	YEFA012003	Chassis	
5	YEFX0214243	Bracket	
6	YEFM031361	Laser Seal	
21	YEJT03015	Screw, M3x6mm	
22	YEJT03009	Screw, M3x8mm	
23	XSB26+4FX	Screw, M2.6x4mm	
24	XTB3+6FFX	Screw, M3x6mm	

11 EXPLODED VIEW (Unit)



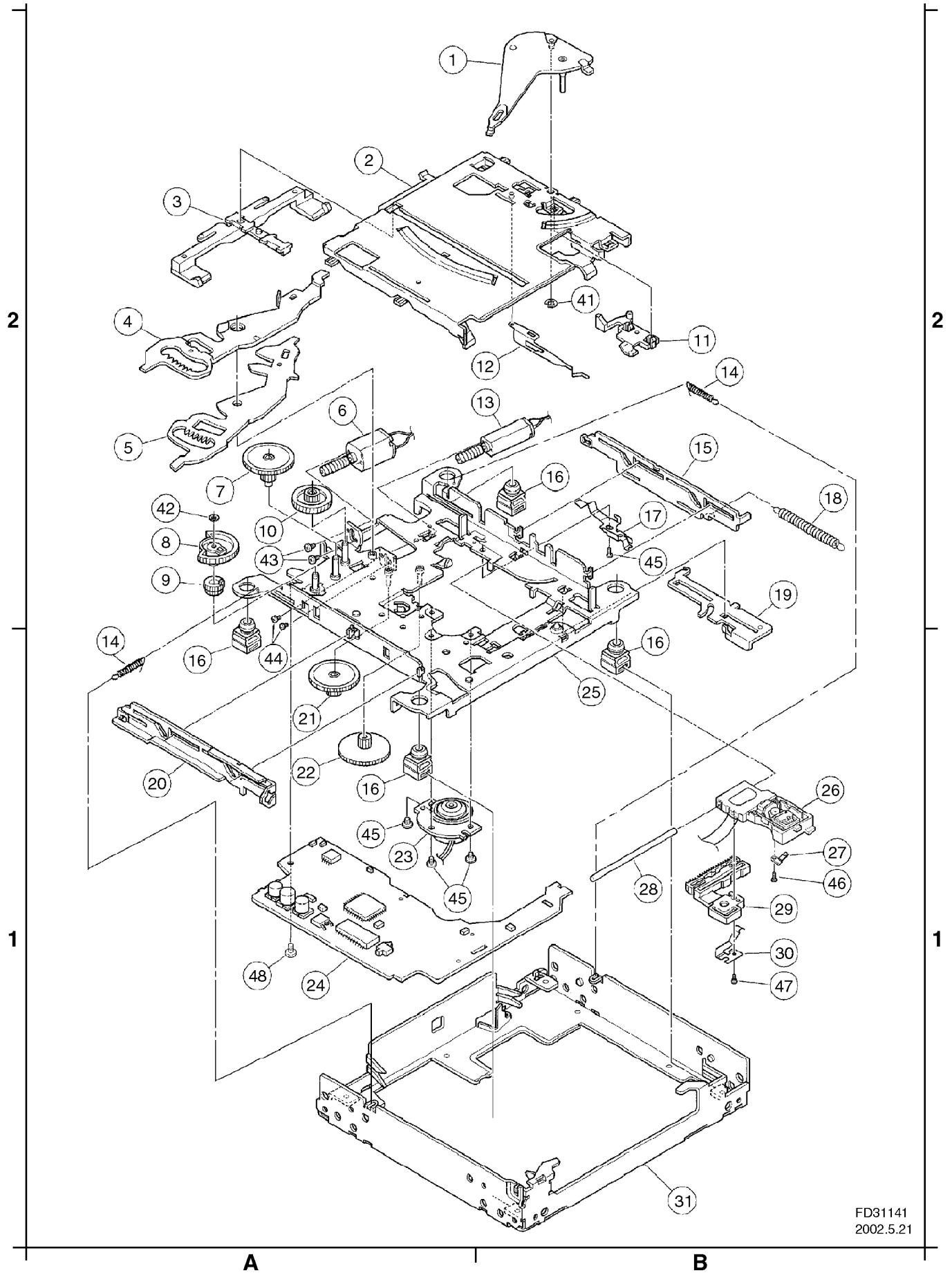
12 MD PLAYER PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
[E9157] MD Servo Block			
ICs AND TRANSISTORS			
IC101	C1BB00000679	IC	
IC401	C1BB00000680	IC	
IC501	C2CBHH000041	IC	
IC901	C0GBY0000007	IC	
Q101	B1ADMD000003	Transistor	
Q102	B1GDCFJN0011	Transistor	
Q501	B1GDCFJN0011	Transistor	
Q901	B1ADND000004	Transistor	
Q902	YEANC114YUTX	Transistor	
DIODES			
D901	B0ACCK000005	Diode	
D902	B0JCDD000001	Diode	
CAPACITORS			
C101	F1J1A1050010	Ceramic, 1pF 10WV	
C102	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C103	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C104	F1J1A1050010	Ceramic, 1pF 10WV	
C105	YECUZ1H103KX	Ceramic, 0.01pF 50WV	
C106	YECUZ1H103KX	Ceramic, 0.01pF 50WV	
C107	YECUSW0J156MA	Tantalum, 15pF 6.3WV	
C108	YECUZ1H472KX	Ceramic, 4700PF 50WV	
C109	F1H1H682A190	Ceramic, 6800PF 50WV	
C111	F1J1A1050010	Ceramic, 1pF 10WV	
C112	F1J1A1050010	Ceramic, 1pF 10WV	
C113	YECUZ1H103KX	Ceramic, 0.01pF 50WV	
C115	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C116	F1J1A1050010	Ceramic, 1pF 10WV	
C117	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C118	YECUZ1C683KX	Ceramic, 0.068pF 16WV	
C119	YECUZ1H472KX	Ceramic, 4700PF 50WV	
C120	F1J1A1050010	Ceramic, 1pF 10WV	
C121	YECUZ1H472KX	Ceramic, 4700PF 50WV	
C122	YECUS1C224KX	Ceramic, 0.22pF 16WV	
C123	YECUZ1H472KX	Ceramic, 4700PF 50WV	
C124	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C125	F1H1C473A005	Ceramic, 0.047pF 16WV	
C126	YECUZ1H102KX	Ceramic, 1000PF 50WV	
C401	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C403	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C404	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C408	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C409	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C411	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C412	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C413	YECUZ1H103KX	Ceramic, 0.01pF 50WV	
C414	YECUS1C474KX	Ceramic, 0.47pF 16WV	
C415	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C416	F1H1H471A231	Ceramic, 470PF 50WV	
C417	F1H1H153A201	Ceramic, 0.015pF 50WV	
C418	YECUS1C474KX	Ceramic, 0.47pF 16WV	
C419	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C420	F1J1A1050010	Ceramic, 1pF 10WV	
C421	F1J1A1050010	Ceramic, 1pF 10WV	
C422	F1J1A1050010	Ceramic, 1pF 10WV	
C424	YECUSW1A106MA	Tantalum, 10pF 10WV	
C451	F1J1A1050010	Ceramic, 1pF 10WV	
C452	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C453	F1J1A1050010	Ceramic, 1pF 10WV	
C454	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C455	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C456	YECUZ1H102KX	Ceramic, 1000PF 50WV	
C457	YECUZ1H102KX	Ceramic, 1000PF 50WV	
C458	ECEV1AA101SP	Electrolytic, 100pF 10WV	
C501	YECUZ1C104KX	Ceramic, 0.1pF 16WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C502	YECUZ1H102KX	Ceramic, 1000PF 50WV	
C503	F1J1A1050010	Ceramic, 1pF 10WV	
C508	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C901	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C902	YECUZ1H103KX	Ceramic, 0.01pF 50WV	
C903	F1H1H331A231	Ceramic, 330PF 50WV	
C904	F1H1H331A231	Ceramic, 330PF 50WV	
C905	YECUZ1H103KX	Ceramic, 0.01pF 50WV	
C906	F3B1A226A001	Tantalum, 22pF 10WV	
C907	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C908	YECUZ1C104KX	Ceramic, 0.1pF 16WV	
C909	ECEV0JA221WP	Electrolytic, 220pF 6.3WV	
C910	F1J1A1050010	Ceramic, 1pF 10WV	
C911	ECEV1AA101SP	Electrolytic, 100pF 10WV	
RESISTORS			
R101	ERJ6GEYJ1R0	Chip, 1.0 Ω 1/10W	
R102	ERJ6GEYJ100	Chip, 10 Ω 1/10W	
R103	ERJ3GEYJ102V	Chip, 1k Ω 1/16W	
R104	ERJ3GEYJ104V	Chip, 100k Ω 1/16W	
R105	ERJ3GEYJ222V	Chip, 2.2k Ω 1/16W	
R106	ERJ3GEYJ474V	Chip, 470k Ω 1/16W	
R107	ERJ3GEYJ222V	Chip, 2.2k Ω 1/16W	
R108	ERJ3GEYJ271J	Chip, 270 Ω 1/16W	
R109	ERJ3GEYJ123V	Chip, 12k Ω 1/16W	
R110	ERJ3GEYJ271J	Chip, 270 Ω 1/16W	
R113	ERJ3GEYJ103V	Chip, 10k Ω 1/16W	
R114	ERJ3GEYJ682V	Chip, 6.8k Ω 1/16W	
R115	ERJ3GEYJ473V	Chip, 47k Ω 1/16W	
R117	ERJ3GEYJ133V	Chip, 13k Ω 1/16W	
R118	ERJ3GEYJ133V	Chip, 13k Ω 1/16W	
R120	ERJ3GEYJ103V	Chip, 10k Ω 1/16W	
R121	ERJ3GEYJ563V	Chip, 56k Ω 1/16W	
R122	ERJ3GEYJ102V	Chip, 1k Ω 1/16W	
R123	ERJ3GEYJ121V	Chip, 120 Ω 1/16W	
R124	ERJ3GEYJ121V	Chip, 120 Ω 1/16W	
R413	ERJ3GEYJ121V	Chip, 120 Ω 1/16W	
R417	ERJ3GEYJ103V	Chip, 10k Ω 1/16W	
R418	ERJ3GEYJ104V	Chip, 100k Ω 1/16W	
R419	ERJ3GEYJ684V	Chip, 680k Ω 1/16W	
R420	ERJ3GEYJ151V	Chip, 150 Ω 1/16W	
R421	ERJ3GEYJ332V	Chip, 3.3k Ω 1/16W	
R422	ERJ3GEYJ102V	Chip, 1k Ω 1/16W	
R423	ERJ3GEYJ102V	Chip, 1k Ω 1/16W	
R424	ERJ3GEYJ105V	Chip, 1M Ω 1/16W	
R425	ERJ6GEYJ100	Chip, 10 Ω 1/10W	
R451	ERJ3GEYJ121V	Chip, 120 Ω 1/16W	
R452	ERJ3GEYJ121V	Chip, 120 Ω 1/16W	
R453	ERJ6GEYJ220	Chip, 22 Ω 1/10W	
R502	ERJ3GEYJ563V	Chip, 56k Ω 1/16W	
R503	ERJ3GEYJ121V	Chip, 120 Ω 1/16W	
R505	ERJ3GEYJ684V	Chip, 680k Ω 1/16W	
R511	ERJ3GEYJ332V	Chip, 3.3k Ω 1/16W	
R512	ERJ3GEYJ332V	Chip, 3.3k Ω 1/16W	
R513	ERJ3GEYJ332V	Chip, 3.3k Ω 1/16W	
R901	ERJ3GEYJ153V	Chip, 15k Ω 1/16W	
R902	ERJ3GEYJ223V	Chip, 22k Ω 1/16W	
R903	ERJ3GEYJ103V	Chip, 10k Ω 1/16W	
R904	ERJ3GEYJ123V	Chip, 12k Ω 1/16W	
R905	ERJ3GEYJ223V	Chip, 22k Ω 1/16W	
R906	ERJ3GEYJ103V	Chip, 10k Ω 1/16W	
R907	ERJ3GEYJ333V	Chip, 33k Ω 1/16W	
R908	ERJ3GEYJ682V	Chip, 6.8k Ω 1/16W	
R909	ERJ3GEYJ123V	Chip, 12k Ω 1/16W	
R910	ERJ6GEYJ332	Chip, 3.3k Ω 1/10W	
R911	ERJ3GEYJ332V	Chip, 3.3k Ω 1/16W	
R912	ERJ3GEYJ153V	Chip, 15k Ω 1/16W	
R913	ERJ3GEYJ332V	Chip, 3.3k Ω 1/16W	
R914	ERJ6GEYJ332	Chip, 3.3k Ω 1/10W	

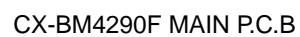
Ref. No.	Part No.	Part Name & Description	Remarks
CONNECTORS			
CN1	K1KB14B00027	Connector, 14P	
CN101	K1MN20B00001	Connector, 20P	
SWITCHES			
SW1	K0L1BA000022	Switch	
SW2,3	K0L1BA000023	Switch	
CRYSTALS			
XL401	H2D225500002	Crystal	
XL501	YEXLSTCC737T	Crystal	
COILS			
L401,402	J0JAC0000047	Ciol	
L451	J0JAC0000047	Ciol	
L452	YELTBLM1B601	Ciol	
L453,454	J0JAC0000047	Ciol	
L501	J0JAC0000047	Ciol	
NETWORK RESISTORS			
RA401-403	CN1J4ATD121J	Network Resistor	
RA404	CN1J4ATD103J	Network Resistor	
RA506	CN1J4ATD121J	Network Resistor	
Mechanical Parts			
MISCELLANEOUS			
1	YEFX0462198	SL Action Plate Ass'y	
2	YEFA012006	Cartridge Holder S	
3	YEFX0462122	Slider	
4	YEFX0462193	Link Plate US	
5	YEFX0462192	Link Plate LS	
6	YEP0FX4951S	Loading Motor Ass'y	
7	YEFX0031061	Loading Gear C	
8	YEFX0031062	Loading Gear D1	
9	YEFX0031067	Loading Gear D2	
10	YEFX0031060	Loading Gear B	
11	YEFX0462131	Shatter Opener	
12	YEFX0052521	Shatter Closer	
13	YEP0FX4950S	Feed Motor Ass'y	
14	YEFX0052537	Grand Spring	
15	YEFX0462191	Slide Cam Plate RS	
16	YEFX04715	Front Damper	
17	YEFX0462189	Link Push Plate S	
18	YEFX0052652	Cam Spring	
19	YEFX0462190	Cam Plate S	
20	YEFX0462127	Slide Cam Plate L	
21	YEFX0031156	Faed Gear BS	
22	YEFX0031157	Faed Gear CS	
23	MFN3GL75BC	Spindle Motor	
24	YEP0PT9157A0	PCB w/Component	RTL
25	YEFA012047	Suspension Chassis Ass'y	
26	L1BBC0000001	Pick-Up	
27	YEFX0052626	Sub Shaft Spring S	
28	YEFW062783	PU Shaft S	
29	YEFX0031155	Feed Rack S	
30	YEFX0052627	PU Shaft Spring S	
31	YEFA011890	Main Shassis	
41	YEJE01028	E Ring S 1.5	
42	YEFX014078	Polyslider	
43	YEJS06252	Screw, M1.4x1.8mm	
44	YEJS06249	Screw, M1.2x1.8mm	
45	YEJS06250	Screw, M1.7x2mm	
46	YEJS06298	Screw,	
47	YEJS06299	Screw,	
48	YEJT03315	Screw,	

13 EXPLODED VIEW (MD Deck)

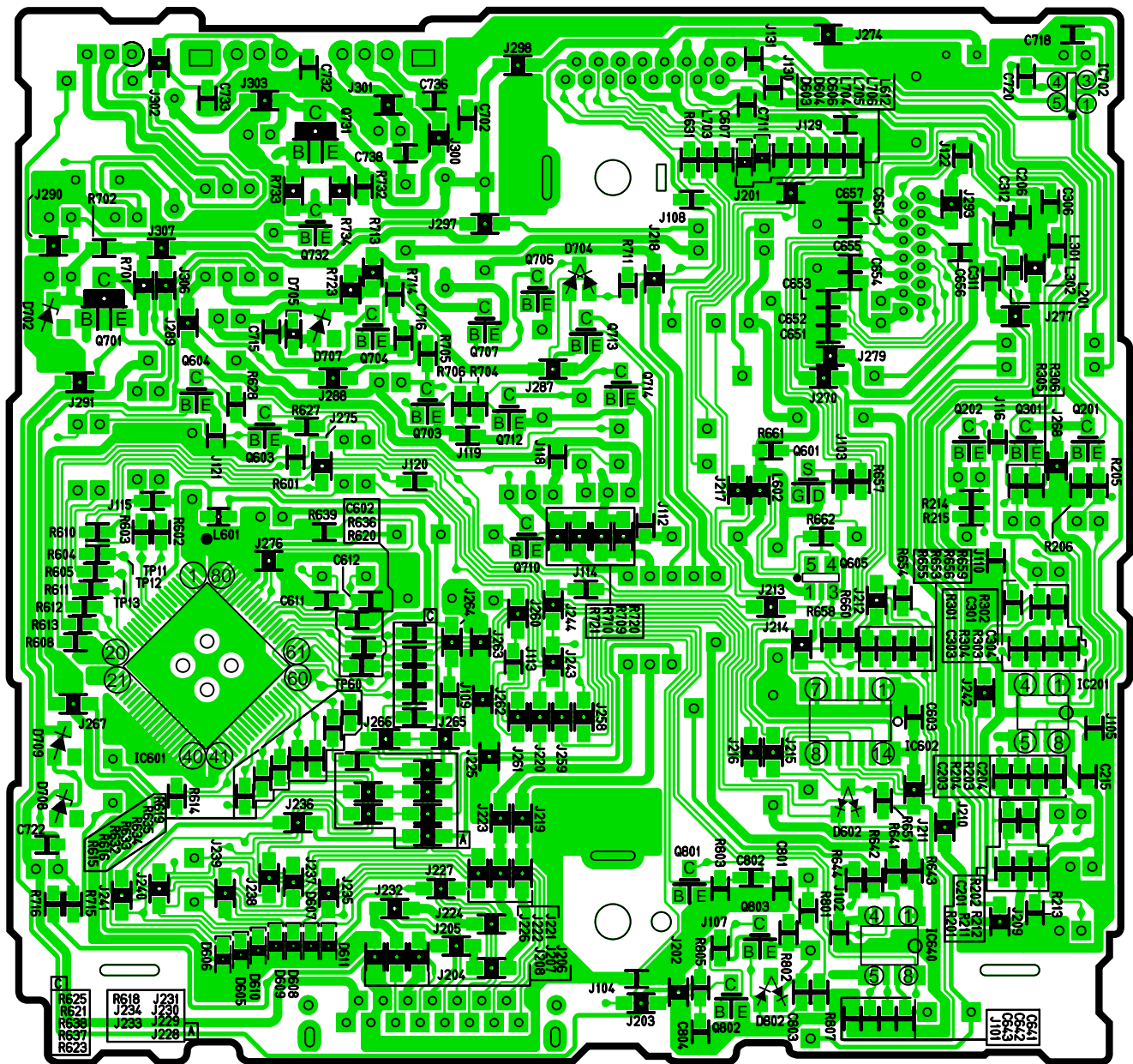


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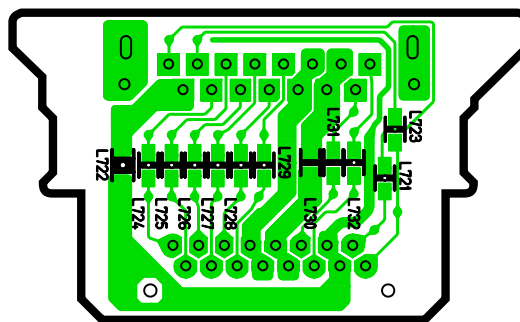
The top view of the E-9167a circuit board shows a complex layout of components and connectors. Key components include two integrated circuits, IC701 and IC703, located in the upper right quadrant. A large central component, likely a microcontroller or processor, is surrounded by numerous capacitors (e.g., C719, C701, C737, C735, C734, C731, C707, C714, C709, C601, C205, C305, C302, C202, C214, C213) and resistors (e.g., R731, R717, R709, R707, R704, R703, R702, R701, R700, R699, R698, R697, R696, R695, R694, R693, R692, R691, R690, R689, R688, R687, R686, R685, R684, R683, R682, R681, R680, R679, R678, R677, R676, R675, R674, R673, R672, R671, R670, R669, R668, R667, R666, R665, R664, R663, R662, R661, R660, R659, R658, R657, R656, R655, R654, R653, R652, R651, R650, R649, R648, R647, R646, R645, R644, R643, R642, R641, R640, R639, R638, R637, R636, R635, R634, R633, R632, R631, R630, R629, R628, R627, R626, R625, R624, R623, R622, R621, R620, R619, R618, R617, R616, R615, R614, R613, R612, R611, R610, R609, R608, R607, R606, R605, R604, R603, R602, R601, R600, R599, R598, R597, R596, R595, R594, R593, R592, R591, R590, R589, R588, R587, R586, R585, R584, R583, R582, R581, R580, R579, R578, R577, R576, R575, R574, R573, R572, R571, R570, R569, R568, R567, R566, R565, R564, R563, R562, R561, R560, R559, R558, R557, R556, R555, R554, R553, R552, R551, R550, R549, R548, R547, R546, R545, R544, R543, R542, R541, R540, R539, R538, R537, R536, R535, R534, R533, R532, R531, R530, R529, R528, R527, R526, R525, R524, R523, R522, R521, R520, R519, R518, R517, R516, R515, R514, R513, R512, R511, R510, R509, R508, R507, R506, R505, R504, R503, R502, R501, R500, R499, R498, R497, R496, R495, R494, R493, R492, R491, R490, R489, R488, R487, R486, R485, R484, R483, R482, R481, R480, R479, R478, R477, R476, R475, R474, R473, R472, R471, R470, R469, R468, R467, R466, R465, R464, R463, R462, R461, R460, R459, R458, R457, R456, R455, R454, R453, R452, R451, R450, R449, R448, R447, R446, R445, R444, R443, R442, R441, R440, R439, R438, R437, R436, R435, R434, R433, R432, R431, R430, R429, R428, R427, R426, R425, R424, R423, R422, R421, R420, R419, R418, R417, R416, R415, R414, R413, R412, R411, R410, R409, R408, R407, R406, R405, R404, R403, R402, R401, R400, R399, R398, R397, R396, R395, R394, R393, R392, R391, R390, R389, R388, R387, R386, R385, R384, R383, R382, R381, R380, R379, R378, R377, R376, R375, R374, R373, R372, R371, R370, R369, R368, R367, R366, R365, R364, R363, R362, R361, R360, R359, R358, R357, R356, R355, R354, R353, R352, R351, R350, R349, R348, R347, R346, R345, R344, R343, R342, R341, R340, R339, R338, R337, R336, R335, R334, R333, R332, R331, R330, R329, R328, R327, R326, R325, R324, R323, R322, R321, R320, R319, R318, R317, R316, R315, R314, R313, R312, R311, R310, R309, R308, R307, R306, R305, R304, R303, R302, R301, R300, R299, R298, R297, R296, R295, R294, R293, R292, R291, R290, R289, R288, R287, R286, R285, R284, R283, R282, R281, R280, R279, R278, R277, R276, R275, R274, R273, R272, R271, R270, R269, R268, R267, R266, R265, R264, R263, R262, R261, R260, R259, R258, R257, R256, R255, R254, R253, R252, R251, R250, R249, R248, R247, R246, R245, R244, R243, R242, R241, R240, R239, R238, R237, R236, R235, R234, R233, R232, R231, R230, R229, R228, R227, R226, R225, R224, R223, R222, R221, R220, R219, R218, R217, R216, R215, R214, R213, R212, R211, R210, R209, R208, R207, R206, R205, R204, R203, R202, R201, R200, R199, R198, R197, R196, R195, R194, R193, R192, R191, R190, R189, R188, R187, R186, R185, R184, R183, R182, R181, R180, R179, R178, R177, R176, R175, R174, R173, R172, R171, R170, R169, R168, R167, R166, R165, R164, R163, R162, R161, R160, R159, R158, R157, R156, R155, R154, R153, R152, R151, R150, R149, R148, R147, R146, R145, R144, R143, R142, R141, R140, R139, R138, R137, R136, R135, R134, R133, R132, R131, R130, R129, R128, R127, R126, R125, R124, R123, R122, R121, R120, R119, R118, R117, R116, R115, R114, R113, R112, R111, R110, R109, R108, R107, R106, R105, R104, R103, R102, R101, R100, R99, R98, R97, R96, R95, R94, R93, R92, R91, R90, R89, R88, R87, R86, R85, R84, R83, R82, R81, R80, R79, R78, R77, R76, R75, R74, R73, R72, R71, R70, R69, R68, R67, R66, R65, R64, R63, R62, R61, R60, R59, R58, R57, R56, R55, R54, R53, R52, R51, R50, R49, R48, R47, R46, R45, R44, R43, R42, R41, R40, R39, R38, R37, R36, R35, R34, R33, R32, R31, R30, R29, R28, R27, R26, R25, R24, R23, R22, R21, R20, R19, R18, R17, R16, R15, R14, R13, R12, R11, R10, R9, R8, R7, R6, R5, R4, R3, R2, R1). The board also features several connectors, including CN603, CN602, and J501 through J512. Two test points, AT1 and AT2, are indicated. The board is populated with various components, including capacitors, resistors, and integrated circuits, all connected by a dense network of traces.



14.2. Main Block (Bottom View)



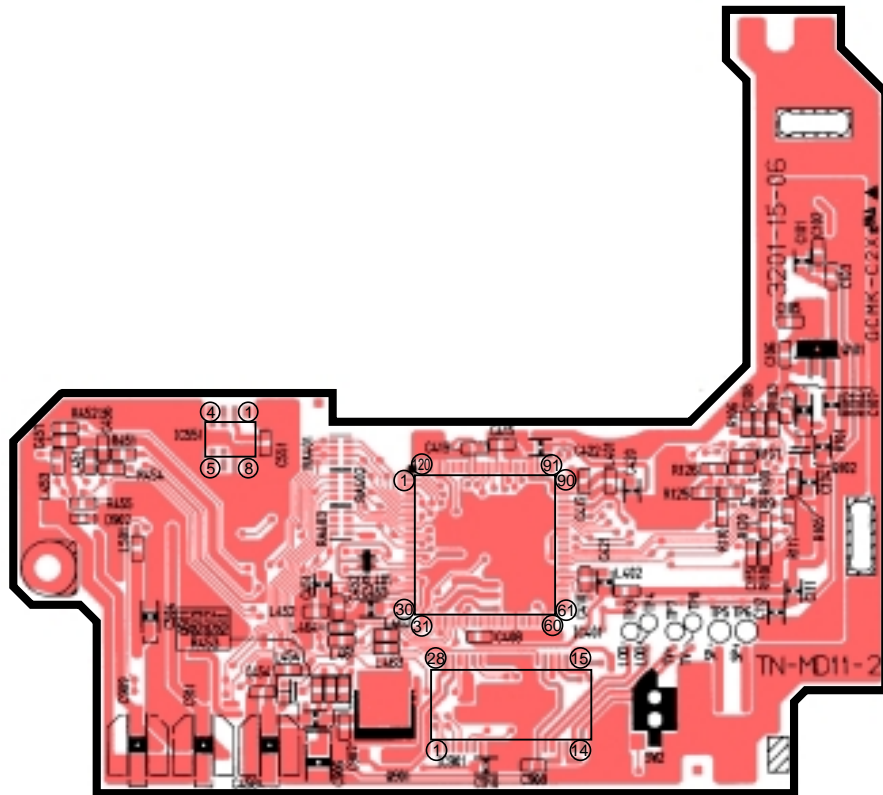
[E-9167a] [Bottom View]



[E-9167b] [Bottom View]

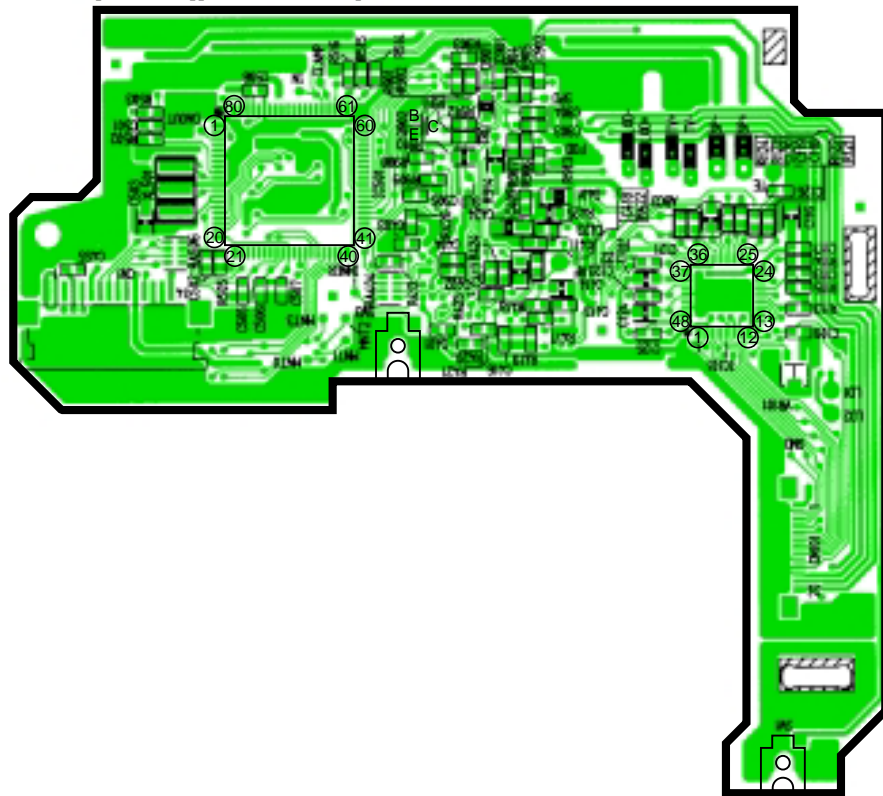
CX-BM4290F MAIN P.C.B

14.3. MD Servo Block



[E-9157][Top View]

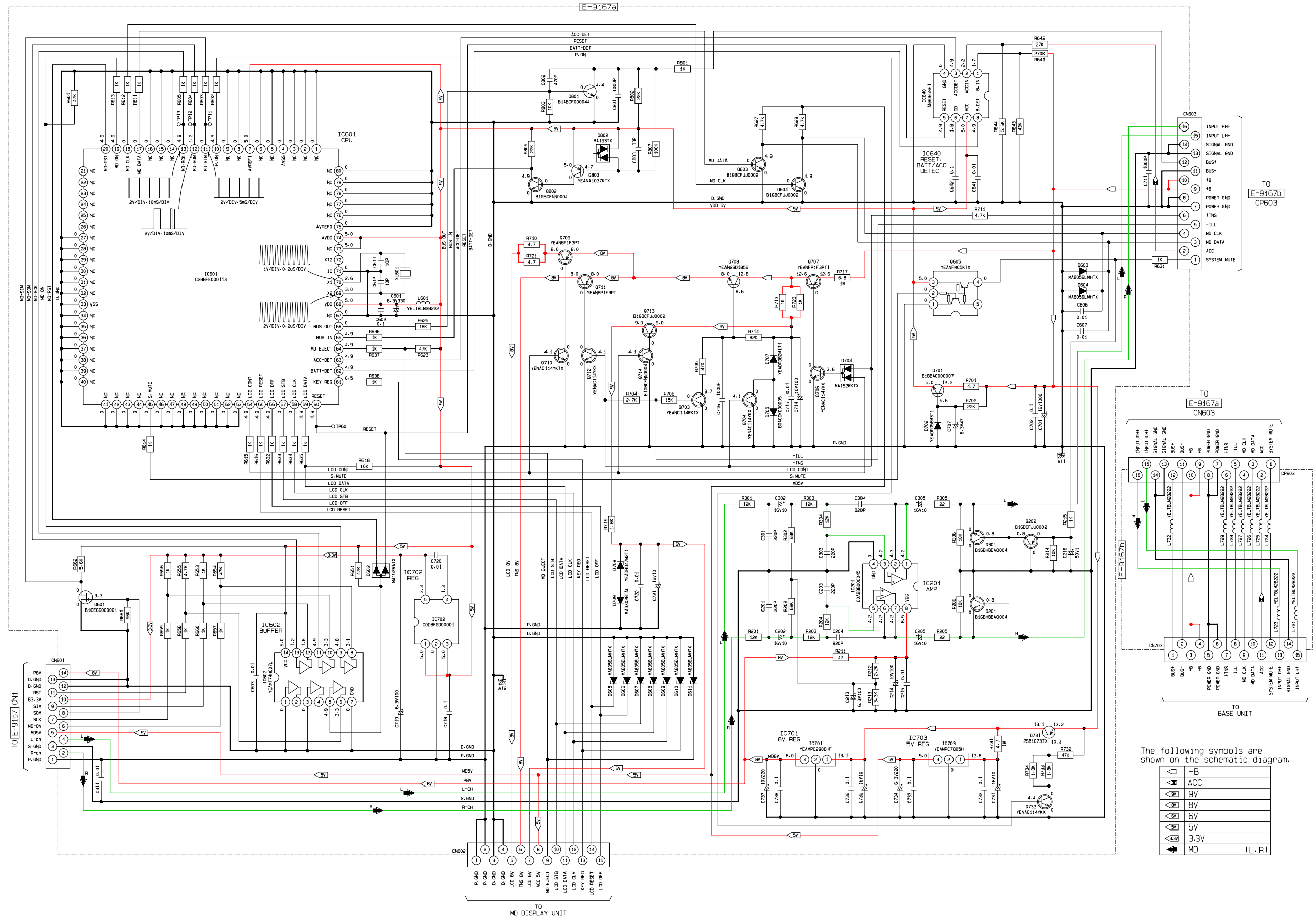
[E-9157][Bottom View]



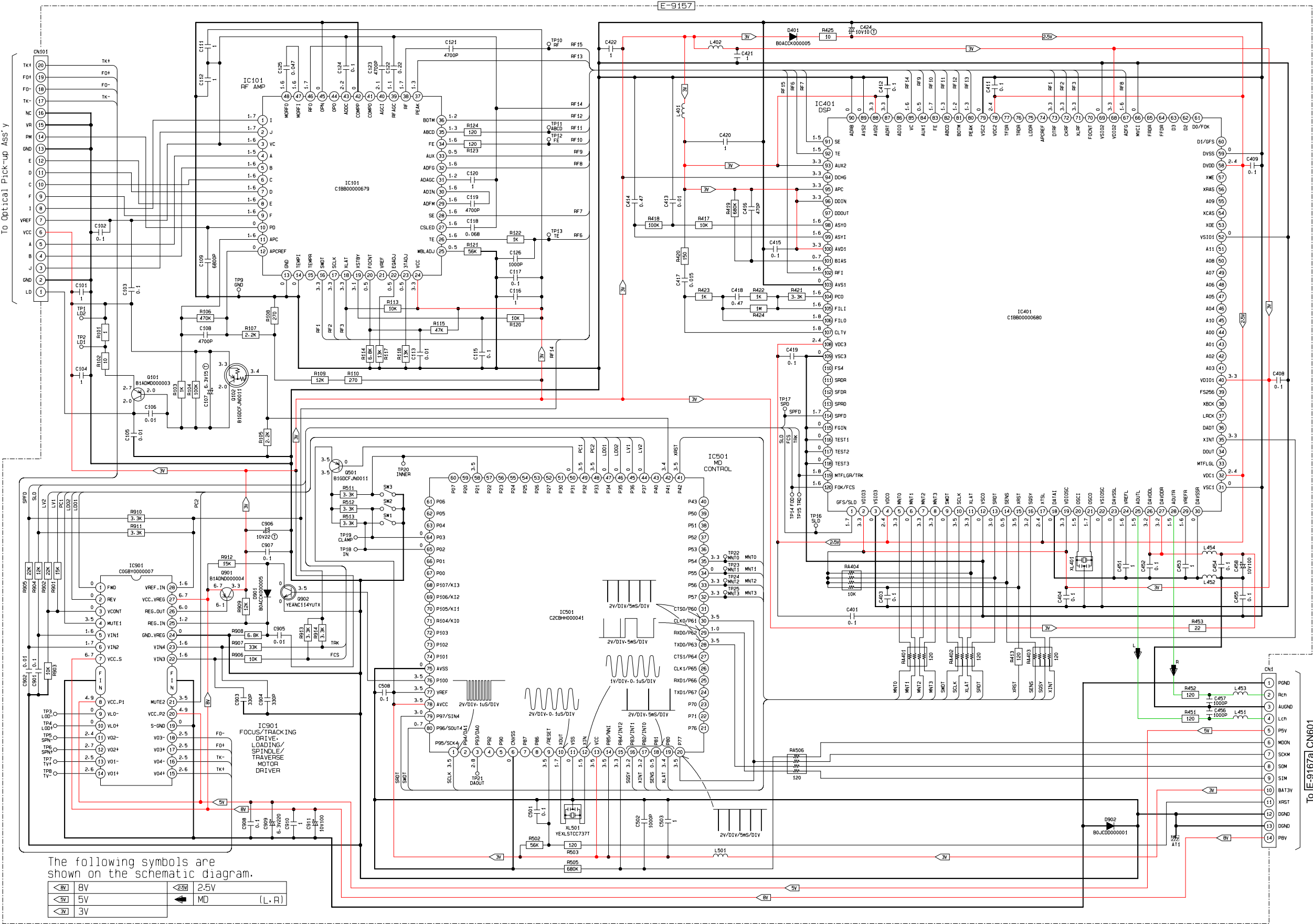
YEFD31141 MD DECK P.C.B

15 SCHEMATIC DIAGRAM

15.1. Main Block



15.2. MD Servo Block



The following symbols are shown on the schematic diagram.

	8V		2.5V
	5V		MD (L, R)
	3V		